AMENDMENTS TO THE CLAIMS

Please add or amend the claims to read as follows, and cancel without prejudice or disclaimer to resubmission in a divisional or continuation application claims indicated as cancelled:

1. (Currently amended) An apparatus ~~Apparatus~~ for ~~the~~ processing ~~of~~ a sectional image ~~(I)~~ that is reconstructed from X-ray projections of an object from different directions, the apparatus ~~being adapted~~ programmed to execute the following steps: a) segmenting at least one segmented area from the sectional image, where the reconstructed X-ray density within said at least one segmented area lies within a given density interval; ~~determination~~ b) determining ~~of~~ a baseline function ~~(B)~~ that describes spatially slowly varying artifacts of the sectional image ~~(I)~~ based on the data of said at least one segmented area; ~~b)~~ c) calculating a corrected image ~~(I*)~~ by compensating the original sectional image ~~(I)~~ with the help of said baseline function ~~(B)~~.

2. (Currently amended) An apparatus ~~Apparatus~~ according to claim 1, ~~characterised in that~~ wherein the sectional image ~~(I)~~ represents a three-dimensional volume, ~~and that~~ the corresponding three-dimensional baseline function ~~(B)~~ is composed of separate two-dimensional baseline functions that are calculated for two-dimensional slices of the sectional image ~~(I)~~.

3. (Cancelled)

4. (Currently amended) An apparatus ~~Apparatus~~ according to claim ~~3~~ 1, ~~characterised in that~~ wherein the baseline function ~~(B)~~ is determined by fitting a parametric model function to the data in the segmented areas ~~(M)~~.

5. (Currently amended) An apparatus ~~Apparatus~~ according to claim 4, ~~characterised in that~~ wherein the parametric model function is a spline function ~~and/or~~ or a polynomial, preferably a polynomial of sixth degree.

6. (Currently amended)   An apparatus ~~Apparatus~~ according to claim ~~3~~ 1, ~~characterised in that~~ wherein the baseline function is determined by low-pass filtering of the data in the segmented areas ~~(M)~~.

7. (Currently amended)   An apparatus ~~Apparatus~~ according to claim 1, ~~characterised in that~~ wherein the baseline function is determined by a) spectral analysis of the sectional image ~~(I)~~ or the segmented areas ~~(M)~~ of the sectional image; b) composition of the baseline function from only the lower frequency components of the resulting spectrum.

8. (Currently amended)   An apparatus ~~Apparatus~~ according to claim 1, ~~characterised in that~~ wherein image areas outside the object are segmented and excluded from the correction with the baseline function ~~(B)~~.

9. (Currently amended)   An apparatus ~~Apparatus~~ according to claim 1, ~~characterised in that it comprises~~ comprising a rotational cone beam X-ray device for the generation of X-ray projections of an object.

10. (Currently amended)   A method ~~Method~~ for ~~the~~ processing ~~of~~ a sectional image ~~(I)~~ that is reconstructed from X-ray projections of an object from different directions, ~~comprising the following steps~~ the method comprising: a) segmenting at least one segmented area from the sectional image, where the reconstructed X-ray density within said at least one segmented area lies within a given density interval; ~~a)~~ b) ~~determination~~ determining of a baseline function ~~(B)~~ that describes spatially slowly varying artifacts of the sectional image ~~(I)~~ based on the data of said at least one segmented area; ~~b)~~ c) calculating a corrected image ~~(I*)~~ by compensating the original sectional image ~~(I)~~ with the help of said baseline function ~~(B)~~.